P0225 **Genomic studies of the coconut (Cocos nucifera L.)**

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The evolutionary history of the monotypic coconut (*Cocos nucifera* L.) is intriguing and its geographical origin remains unknown. The coconut is the quintessential strand plant, colonizing sandy coastal beaches and islands in the humid tropics and is well adapted for flotation and natural dispersal by oceanic currents. This palm has also been disseminated by humans for millennia through voyages of exploration and establishment of trade routes across the Indian and Pacific Oceans. This long-term human interaction with the coconut has altered its phenotype and the lack of a universal domestication trait has obscured the putative wild phenotype. Developments in molecular techniques such as next generation sequencing may well prove useful in elucidation of the coconut's origin. Here we propose to apply NGS to multi-loci molecular markers for 20 populations (188 individuals), sampled worldwide to examine the phylogeography, phylogeny, lineage sorting and discovery of polymorphisms for understanding the evolutionary history of the coconut. We will perform parallel tagged sequencing (PTS) for barcoding multiple samples and use the Illumina platform for high throughput sequencing.

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